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Troubleshooting Scenarios

Procedure

These are the troubleshooting scenarios at the time this lab guide was written.

Troubleshooting VLANs and Trunks

File name	Description
VLAN-a.txt	VLAN 2x is deleted; interface FastEthernet0/10 is still assigned to VLAN 2x. The VLAN must be re-created. Note that this file deletes VLANs 21, 22, 23, 24, 25, 26 so it can be used for all pods.
VLAN-b.txt	The switch's FastEthernet 0/11 is changed to **switchport mode dynamic auto**. The core switch interface is also configured for dynamic auto, so they don't negotiate trunking.
VLAN-c.txt	The switch's FastEthernet 0/1 to PxR1 native VLAN was changed to VLAN 10; it should be VLAN 1.
VLAN-d.txt	The switch's FastEthernet 0/1 to PxR1 was changed to be an access port; it should be a trunk.
VLAN-e.txt	The switch's FastEthernet 0/2 interface is shut down. It should be operational.
VLAN-f.txt	The switch's FastEthernet 0/2 is in VLAN 1. It should be on VLAN 3x.
VLAN-g.txt	The switch is only allowing VLAN 1 on the FastEthernet 0/1 trunk to PxR1. It should allow VLANs 1, 1x, 2x, 3x on this trunk.
VLAN-h.txt	The switch's address is configured under interface VLAN 1 but it is in the wrong subnet. The address is 10.1.77.100; it should be 172.16.1.1x3, in the VLAN1 subnet.

Troubleshooting IP Connectivity

File name	Description
On PCs	No entry in local hosts file for "Server"; need to add.
IP-SW-a.txt	The switch's default gateway is set to wrong address, 10.10.7.1. It should be 10.10.x.1.
IP-PxR2-b.txt	The default route on PxR2 to PxR1 was deleted. It should be **ip route 0.0.0.0 0.0.0.0 10.3.x.1**.
	Note There is a separate file for each pod; substitute the "x" in the file name with your pod number.
IP-R1-c.txt	In ACL 100 on PxR1, the **permit ip any any** was replaced with **permit tcp any any**.

Troubleshooting EIGRP

Note	There is a separate file for each pod; substitute the "x" in the file name with your pod number.

File name	Description
EIGRP-PxR1-a.txt	The **passive-interface GigabitEthernet 0/1** command is configured; it should not be there.
EIGRP-PxR1-b.txt	The GigabitEthernet 0/1 interface is shutdown; it should be up.
EIGRP-PxR1-c.txt	The commands **network 10.1.x.0 0.0.0.255** and **network 10.2.x.0 0.0.0.255** were deleted. They need to be put back.
EIGRP PxR1-d.txt	There is an incorrect IP address and mask on interface GigabitEthernet 0/0.3x. It is 10.3.7.1/24; it should be 10.3.x.1/24.
EIGRP PxR1-e.txt	There is an incorrect EIGRP AS number; it is 10 but it should be 100.
EIGRP PxR1-f.txt	The **passive-interface GigabitEthernet 0/0.3x** command is configured; it should not be there.
EIGRP PxR1-g.txt	The forth octet of the EIGRP wildcard mask in the **network 192.168.xx.0 0.0.0.0** command is wrong; the mask should be 0.0.0.255.
EIGRP PxR1-h.txt	The "K-values" (metric weights) were changed from the defaults. You can change them back to the defaults by either using **metric weights 0 1 0 1 0 0**, or (even easier) **no metric weights;** both of these commands go under the EIGRP process (**router eigrp 100**).

Troubleshooting OSPF

Note	There is a separate file for each pod; substitute the "x" in the file name with your pod number.

File name	Description
OSPF-PxR1-a.txt	The fourth octet of the OSPF **network 10.3.x.0 0.0.0.0 area x** command is wrong; the mask should be **0.0.0.255**.
OSPF-PxR1-b.txt	The address in the **network 192.162.xx.0 0.0.0.255 area 0** command is wrong; it should be 192.168.xx.0.
OSPF-PxR1-c.txt	The **passive-interface GigabitEthernet 0/1** command is configured; it should not be there.
OSPF-PxR1-d.txt	The gigabit 0/0.3x interface is **shutdown**; it should be **no shutdown**.
OSPF-PxR1-e.txt	The **network 10.10.x.0 0.0.0.255 area x** command is missing. It needs to be put back.
OSPF-PxR1-f.txt	The hello interval on GigabitEthernet 0/0.3x is set to 5 seconds, it should be 10 seconds. You can change it using the interface configuration command **ip ospf hello-interval 10**.
OSPF-PxR1-g.txt	PxR1's router ID is set to 10.200.x.2, resulting in the same router ID as PxR2. PxR1's router ID should be its own loopback 100 interface address. You can remove the router ID using the router configuration command **no router-id**; you will have to restart the OSPF process, using the **clear ip ospf process** command in order for this change to take effect.
OSPF-PxR1-h.txt	The IP address on GigabitEthernet 0/1 is set to 192.168.77.1/24. It should be 192.168.xx.1/24.

Troubleshooting a Serial Connection

Note	There is a separate file for each pod; substitute the "x" in the file name with your pod number.

File name	Description
Serial-PxR1-a.txt	The password on the username command is changed from cisco to Cisco. On the Serial 0/0/0 interface the PPP authentication mode is changed to PAP, and then the interface is shutdown. The authentication mode should be CHAP.

ICND2 SuperLab

File name	Description
Super-SW-a.txt	The link between PxSW and the core switch should be configured for EtherChannel using LACP, but the EtherChannel is not working (one port is blocked by STP). This is because PxSW is configured for PAgP, but core switch is still configured for LACP. To fix, change PxSW to LACP.
Super-R1-b.txt	The Serial 0/0/0 interface is shutdown. The encapsulation is changed from PPP to HDLC. The **encapsulation ppp** command needs to be put back on the interface, and the interface needs to be enabled.
Super-PxR1-c.txt	In the OSPF process 1, the **network 192.168.x.96 0.0.0.31 area x** command is missing. It needs to be put back. **Note** There is a separate file for each pod; substitute the "x" in the file name with your pod number.
Super-R1-d.txt	The **ipv6 eigrp 100** command is missing on interface GigabitEthernet 0/1.